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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,405	09/01/2004	Albrecht Kraus	DE 020055	3399

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EXAMINER

WALFORD, NATALIE K

ART UNIT PAPER NUMBER

2879

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/506,405	Applicant(s) KRAUS ET AL.	
	Examiner Natalie K. Walford	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The Amendment, filed on November 21, 2006, has been entered and acknowledged by the Examiner. Newly added claims 14-15 has been entered. Claims 1-15 are pending in the instant application.

The Examiner takes notice of the Petition filed with the Amendment on November 21, 2006. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. Hence, the Petition is now moot.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Harding (US 6,185,277).

Regarding claim 1, Harding discloses a light source in figure 1 comprising a discharge vessel (item 1) which is filled with a filling gas, and with an electron beam source (area around item 4) arranged in vacuum or in a region of low pressure (column 1, lines 51-55), which source generates electrons (item 4) and propels them through an inlet foil (item 2) into the discharge vessel, characterized in that the inlet foil comprises a diamond layer (column 3, lines 50-52).

Regarding claim 2, Harding discloses a light source as claimed in claim 1, characterized in that the diamond layer has a thickness below 100 μm (column 3, lines 65-66).

Regarding claim 3, Harding discloses a light source as claimed in claim 1, characterized in that the diamond layer has a frame (FIG. 2, item 51).

Regarding claim 4, Harding discloses a light source as claimed in claim 1, characterized in that the diamond layer has a metal brazing layer (FIG. 2, item 51).

Regarding claim 5, Harding discloses a light source as claimed in claim 1, characterized in that the diamond layer has an organic adhesion layer (FIG. 2, item 51).

Regarding claim 6, Harding discloses a light source as claimed in claim 1, characterized in that the electron beam source comprises a thermionic electron emitter (FIG. 1, item 3).

Regarding claim 7, Harding discloses a light source as claimed in claim 1, characterized in that the electron beam source comprises a field emitter (FIG. 1, item 3).

Regarding claim 8, Harding discloses a method of manufacturing a foil (item 2) for a light source in figures 1 and 2, characterized by the following process steps: carbon atoms (column 3, lines 65-67) are deposited on a substrate (item 22) so as to form a diamond foil (item 2 and column 3, lines 50-52), and a portion (item 21) of the substrate is etched away such that a remaining portion of the substrate forms a frame (item 51) for the diamond foil (column 4, lines 1-9).

Regarding claim 9, Harding discloses a method of manufacturing a foil (item 2) for a light source in figures 1 and 2, characterized by the following process steps: carbon atoms (column 3, lines 65-67) are deposited on a substrate (item 22) so as to form a diamond foil (item

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2 and column 3, lines 50-52), the diamond foil is removed from the substrate (column 4, lines 1-9), and the diamond foil is brazed to a frame (item 51).

Regarding claim 10, Harding discloses a method of manufacturing a foil (item 2) for a light source in figures 1 and 2, characterized by the following process steps: carbon atoms (column 3, lines 65-67) are deposited on a substrate (item 22) so as to form a diamond foil (item 2 and column 3, lines 50-52), the diamond foil is removed from the substrate (column 4, lines 1-9), and the diamond foil is adhered to a frame (item 51).

Regarding claim 11, Harding discloses a gas discharge lamp comprising a discharge vessel (item 1) in figure 1, which is filled with a filling gas, which vessel is adapted to produce non-coherent visible light from at least one wall in response to received radiation produced by the gas; an inlet foil comprising a diamond layer (item 2 and column 3, lines 50-52); an electron beam source (area around item 4) arranged in vacuum or in a region of low pressure (column 1, lines 51-55), which source generates electrons (item 4) and propels them through the inlet foil into the discharge vessel, causing the gas to produce the radiation (see FIG. 1). The Examiner notes that the recitation that "a gas discharge lamp" has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause. Also, the Examiner notes that it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Regarding claim 12, Harding discloses a method of manufacturing a light source in figures 1 and 2, comprising, not necessarily in the following order, providing a discharge vessel (item 1) which is filled with a filling gas, which vessel is adapted to produce non-coherent visible light from at least one wall in response to received radiation produced by the gas, an electron beam source (area surrounding item 4) arranged in vacuum or in a region of low pressure (column 1, lines 51-55), which source generates electrons (item 4) and propels them into the discharge vessel, causing the gas to produce the radiation; inserting an inlet foil (item 2) between the source and the vessel, which inlet foil comprises a diamond layer (column 3, lines 50-52). The Examiner notes that it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense.

Regarding claim 14, Harding discloses the light source of claim 2, wherein the diamond layer has a thickness below 50 μm (column 3, lines 65-66).

Regarding claim 15, Harding discloses the light source of claim 2, wherein the diamond layer has a thickness below 20 μm (column 3, lines 65-66).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harding (US 6,185,277).

Regarding claim 13, Harding discloses the method of claim 12, but does not expressly disclose that the light source is a gas discharge lamp, as claimed by Applicant. Harding is cited to show the vessel is a tube envelope that is sealed in a vacuum tight manner. It is known in the art that gas discharge lamps are sealed in the same manner. Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Harding's invention to have the light source be a gas discharge lamp, since it is known in the art that a gas discharge lamp is a tube sealed in a vacuum tight manner, the same as Harding's invention.

Response to Arguments

Applicant's arguments filed November 21, 2006 have been fully considered but they are not persuasive. In response to applicant's argument that Harding is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, x-rays are a type of light. X-rays are highly energetic forms of light, just not visible to the human eye. Light can take on many forms including radio waves, microwaves, infrared, visible, ultraviolet, x-ray, and gamma. Hence, it is understood that x-ray source can be taken to be a light source. Furthermore, Harding is disclosing a tube envelope sealed in vacuum tight (i.e. gas tight) manner, which can be understood to be part of a discharge vessel. There is nothing in Harding to suggest that the tube

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would not be a discharge vessel. The Examiner notes that item 51 of Harding can be described in many different ways to meet Applicant's limitations. Item 51, as described by Harding, is a section, which is not limited to being a layer. Calling item 51 different names is not contradictory because the claims do not depend on each other. If the claims were dependent from each other, it would be contradictory to call the same item number different things. Hence, item 51 can be a frame or a layer. As seen in figures 1 and 2 of Harding, it can be seen that a portion of the substrate is etched away and it is also disclosed (column 4, lines 1-9). Also, the Examiner notes that "adapted to" is not a positive limitation. A part can be adapted to do many things and does not constitute a limitation in any patentable sense.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Contact Information

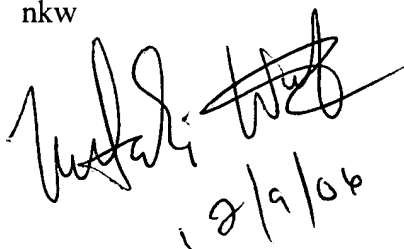
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie K. Walford whose telephone number is (571)-272-6012.

The examiner can normally be reached on Monday-Friday, 8 AM - 4:30 PM.

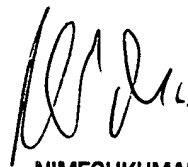
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nkW



12/9/06



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